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ABSTRACT

This study reports the results of a systematic inquiry to assess the extent to which consultant teams had contributed to principals acceptance of innovation. Data were based on the Institutional Change Model developed by an Educational Professional Development Act (EPDA) project. Participants of the study were principals of 12 elementary schools. Six schools contained educational consultant teams while, for control purposes the remaining six did not. Schools were selected from among 54 from 18 counties and 21 school corporations within the reach of university-based consultant teams. A two-part empirically validated questionnaire was individually administered to each of 12 participants. Part 1 of the questionnaire consisted of open-ended questions designed to a) identify innovations, b) determine the cause of innovations, and c) determine the value placed on the innovation. Part 2 of the questionnaire consisted of 24 Likert-type items designed to elicit participants' attitudes toward topics associated with the acceptance of innovation and individualized learning. Each participant was visited twice by the investigator. The results of the inquiry indicated that at the school level there was greater change in the predicated direction among schools using the model than among those not using it. The use of consultants, when an impasse occurred or more training was required, was critical to the successful implementation of the model. A 6-item bibliography and appendixes are included. (Author/MJM)



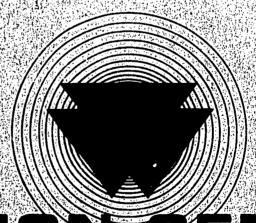
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THE EFFECT OF EDUCATIONAL CONSULTANT TEAMS
ON THE ACCEPTANCE OF INNOVATIONS

John R. Sanders

A Paper Presented at the American Educational Research Association Annual Convention, Chicago, Illinois April 4, 1972



EVALUATIONEEENTER

THE OHIO STATE UNIVERSITY
College of Education

The Effect of Educational Consultant Teams on the Acceptance of Innovations 1,2

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The educational administrator is confronted with demands for an organizational model which meets two seemingly irreconcilable criteria: a model which is receptive to a myriad of curricular and instructional alternatives; a model that enables school authorities to be accountable to their various publics. Adding to these demands the constraints that the new structure be implemented without additional public funds, without the assured support of the professional unions, and without a moratorium on current developmental activity, the school administrator is faced with a formidable task.

This paper concerns the study of an Educational Professions Development Act (EPDA) project that addresses itself to testing a generalizable
model for coping with this task. Part one describes in detail the
model being tested, while part two explicates the hypotheses, methodology
and results of a study of the model's effect on a specific group of
educational administrators as adoptors of educational innovations.

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Paper presented at the American Educational Research Association annual convention, Chicago, April 4, 1972.

Description of the Model

Context of the Model

The context of the model is provided by Anastasiow and associates (1969) who cogently demonstrate that although much effort has been expended in developing innovative teacher training programs, the teacher behavior in the nation's classrooms remains unchanged. Traditional classroom teacher behavior is especially inappropriate in school systems servicing a significant percentage of culturally deprived youngsters. The learning handicaps and cultural milieu of such students requires individual attention and expertise which is quite apart from traditional teacher behavior. This need is not being met by graduates of innovative teacher training programs. On entry into less affluent school systems, new teachers are quickly socialized and gradually reject their learned teaching behavior for that practiced by the majority of their more experienced colleagues. Hence, the learning problems of culturally deprived students continue to be ignored.

This is the context, baseline data, out of which arose an awareness of the need for the searching out of alternatives to current models of teacher training. The search was guided by the understanding that alternate solutions to the problem of the teacher training model would be institution-oriented rather than individual-oriented. Hence, the development of an "institutional Change Model."

Assumptions and Implications of the Model

The conceptualization of the model included certain assumptions and implications. They are: 1) behavior change affected by individual



change models (e.g., the model of the traditional teacher education programs) is negated by the effect the institution (e.g., the public school) has on prior training; enduring change begins with the gatekeepers, the persons who influence the decision making, of the institution to be changed; 2) training is to be provided for several persons from the institution to be changed so that the individual trainee does not feel isolated on his return to the institutional setting; 3) individuals in training are to have the opportunity to make practical application of their new knowledge and skills in institutional settings that are as similar as possible to those in which they will work after the training has ended; 4) training objectives will relate to the institutional settings to be changed; 5) outside consultant help is to be available to the field training sites.

Evaluation System Used in the Institutional Change Model

The development of the model and the model itself are most clearly explicated in terms of the CIPP evaluation system.³ This acronym represents Context, Input, Process and Product evaluation: four operations which an evaluation system can include to service the information needs of a decision maker. The key words serve as a framework for describing the model.

1) <u>Context evaluation</u> is assessing the needs or identifying the problems; it is the homework done before models are built; it results in the collection of data from which the decision maker

³For a complete explanation of CIPP in comparison with other theories of evaluation, <u>Educational Evaluation and Decision Making</u>, Stufflebeam et al., Chapters 3 and 7.



chooses those problems to which he will devote his resources and attention.

- 2) <u>Input evaluation</u> is assessing the strengths and weaknesses of alternative solutions to high priority problems; it is analyzing extant models and choosing the one (or designing the one) with the highest probability of solving the problem; it results in the collection of data from which the decision maker selects the solution to be implemented.
- 3) <u>Process evaluation</u> is assessing how well the chosen solution is being implemented; it is monitoring the operationalization of the model; it results in the collection of data from which the decision maker guides, stops, recycles the installation and institutionalization of the solution.
- 4) <u>Product evaluation</u> is assessing how well the chosen solution has solved the problem; it is an assessment of the validity of the model; it results in the collection of data by which the decision maker decides whether the problem has been solved, the extent to which the implementation of the model has contributed to the solution and the revisions needed in the original model.

This four-phased evaluation system operates continuously to service all participants in and users of the Institutional Change Model. The evaluation cycle is part of both the micro and macro concerns of the model--that is, it is part of the model and yet serves as a framework for it.



Implementation of the Model

The model, itself, is a result of input evaluation. In process evaluation, attention is focused on the implementation of the model. Figure 1 depicts the applied model.

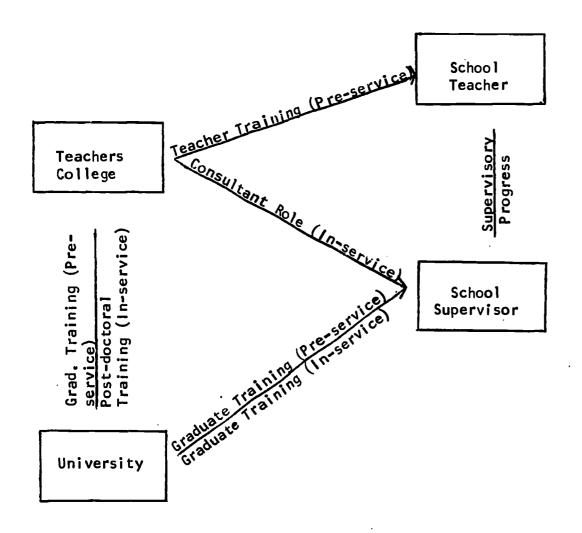


Figure 1

INSTITUTIONAL CHANGE MODEL APPLIED TO THREE SETTINGS

Taken from <u>Proposal to Effect Change in the Training of Teacher Trainers</u>
<u>Through the Model of Diagnostic Teaching</u>, Anastasiow, <u>et al.</u>, p. 10.



Figure 1 indicates three settings (institutions) for which people are to be trained: the university, the teachers college (or small liberal arts colleges), and the schools. The immediate objective of this application of the model is to change the behavior of persons who occupy positions and carry out roles in each of these settings. The long range objective is to effect change in the role behavior of elementary teachers (especially teachers of the culturally disadvantaged) by changing the behavior of those who are shapers of teacher behavior.

To accomplish these objectives, training, as shown in Figure 1, was provided 20 persons working in or preparing to work in one of the three settings. Course work in individual specialty areas (e.g. school psychology, reading, guidance, or special education) combined with seminars on CIPP as a model for diagnostic teaching and work with teachers at field training sites constituted the training program. After six months of course work, the 20 trainees, in self-selected teams of three or four, began to test their ability to apply their knowledge by working with the principals and faculties of six elementary schools (field training sites).

After assignment to a particular school, team members determine a school day in which they can work together weekly at the school. Base-line data needed for the context evaluation is gathered by the team through questionnaires or interviews with teachers, after first spending several sessions interacting with the principal and delineating strategies for working with teachers in a non-threatening manner. Meeting with the teachers, either individually or in groups, is an important part of the team's efforts. The initial meetings provide input evaluation with the faculty augmenting solution strategies suggested by the team.



As the efforts get underway and results either do or do not become visible, the weekly meetings provide an opportunity for reassessing the process evaluation.

The teams are reinforced by university-based consultants who assist them with particular field-based problems. Reading disabilities, modern math, interpersonal relations, and instrument development are some of the more common problem areas posed to consultants. Support to the team is provided by a field coordinator (psychologist) who meets with the teams on-site to discuss their problems, reinforce their progress and provide formal linkage between the university staff and the school principal.

The institutional change model provides training to groups of educators from three institutions. The purpose of this training is to effect lasting change in the way that teachers behave in classrooms. The content of the training is a process for dealing with students as individuals. The process is best represented by the CIPP evaluation system. Figure 2 illustrates a matrix for scheduling activities used to implement the institutional change model.

INSTITUTIONS	UNIVERSITY	TEACHER'S COLLEGES	SCHOOLS	
GROUPS	TRAINERS OF TEACHER TRNR'S	TEACHER TRAINERS	TEACHERS	STUDENTS
CONTEXT	·		1	· · · · · · · · · · · · · · · · · · ·
INPUT				
PROCESS				
PRODUCT				

Figure 2. Process for Implementing the Change Model



All institutions and groups make input at each level of implementation according to their level of interest. This is the micro-level use of CIPP. All group input is monitored by a full time project evaluator, who flags trouble spots for the attention of the project's administrative team, even though his major responsibility is the reporting of macro-level concerns. As an example of the input usage and impact across institutions, teachers at several of the schools where teams were working reported that despite the individual rewarding of deprived students, the students were not making progress and appeared bored. The teams learned from consultants the use of behavior modification techniques which could solve the problem. The evaluator suggested to the project administration that a behavior modification course be arranged for the teams. The course was held and the on-site teachers who later received training from the teams, reported satisfactory improvement in the motivation of their students.

A second example of the effect of CIPP's utilization at the macro-level during implementation of the change model concerns a curricular problem. The teachers at one of the schools reported to the team that there was "no way they could turn the kids on to reading with these text books." So the team sponsored a two-day workshop for that faculty and had the university-based reading consultant plan the program. The workshop brought many new reading programs to the attention of the faculty and they were able to find the program that met most of their needs.



Inquiry into the Model

Objective

One year after the field-based implementation of the model had begun, a study was conducted to assess the degree to which the consultant teams had contributed to the principals' acceptance of innovations.

<u>Methods</u>

Participants for the study were principals of twelve elementary schools. Six schools contained educational consultant teams while for control purposes the remaining six did not. Schools were selected from among 54 from 18 counties and 21 school corporations within the reach of university-based consultant teams. Project and non-project (control) schools were matched on percent of disadvantaged students, average daily attendance, geographic location, and number of grade levels served.

A two-part questionnaire developed and validated with empirical procedures was individually administered to each of 12 participants. Part 1 of the questionnaire consisted of open-ended questions designed to (a) identify the innovations that had been adopted in schools while consultant teams were at work, (b) determine the cause(s) of those innovations and (c) determine the value participants placed upon the innovations. Part 2 of the questionnaire consisted of 24 Likert-type items designed to elicit participants attitudes toward topics associated with the acceptance of innovation and individualized learning.



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See Appendix.

Each participant was visited twice by the investigator. During the first visit the participants read the questionnaire and asked questions about items not immediately clear to them. After analyzing returned questionnaires, the investigator made a second visit to each principal to probe as needed for necessary detail omitted from the open-ended responses in Part 1 and to observe innovations where written accounts were not specific or detailed enough to provide adequate description.

Hypotheses and Related Analysis

The investigator predicted that:

- Hyp. 1: There will be significantly more innovations adopted by project principals than non-project (control) principals during the course of intervention.
- Analysis 1: Tests for the independence of frequencies in a contingency table utilizing chi square procedures.
- Hyp. 2: The adopted innovations reported by the project principals
 will evidence greater correspondence to an individualized learning
 model than those reported by non-project principals.
- Analysis 2: Coefficient of concordance to measure the agreement of five independent raters in judging the extent to which each innovation corresponds to an individualized learning model followed by a <u>t</u>-test to determine differences in rated innovations between project and non-project schools.
- Hyp. 3: For each matched pair of schools there will be significantly more favorable attitudes for the project principals than non-project principals toward the adoption of an individualized



learning model (Hyp. 3)...toward criteria-referenced grading (Hyp. 4)...toward decentralized authority (Hyp. 5)...toward abolition of compulsory education (Hyp. 6).

Analysis 3: The sign test and <u>t</u>-test for small N's to measure differences between attitudinal responses of project and non-project principals.

Results

- Hyp. I: Project schools with the consulting teams did adopt more innovations over the year than did non-project schools without consultant teams. Principals of the project schools identified the consulting teams as the major cause of innovations that were adopted.
- Hyp. 2: innovations of the project schools were not any more related to an individualized learning model than those of non-project schools.
- Hyp. 3-6: Project principals adopted attitudes significantly more favorable to individualized learning than did non-project principals on 8 of 24 response items. For the remaining response items in which no significant differences were found, project principals evidenced more favorable attitudes toward individualized learning than non-project participants.

Unplanned results included feedback from each team indicating that the availability of the field coordinator and the consultants is a critical variable. Team members wanted the field coordinator to observe more of their work with individual teachers and provide them (team



members) with some indication of their effectiveness. They wanted more consultants available to reduce the time lag between problem identification, solution selection, and solution implementation. They wanted time to clarify role ambiguity: are they change agents or evaluators or both? In which role are they less threatening (and therefore more helpful) to teachers?

Team members also commented that after one year of intervention many faculty members in their respective schools are employing CIPP as the means for systematically solving classroom problems. In other words, the change model is being institutionalized by the schools. Further evidence is provided by the increased faculty esprit de corps noted by the teams, by the increased attendance of and participation in faculty meetings, and by the systematic approach used by the faculty in analyzing school-wide or district-wide problems.

Discussion

The paper has reported the results of a systematic inquiry into the effects of an implemented model for producing change in educational institutions. The inquiry found that at the school level there was greater change in the predicated direction among schools using the model than among those not using it. The principals of schools where the predicted changes occurred identified elements of the adopted model as factors contributing to the change. After one of two years of planned intervention, there was found some evidence that a continuous evaluation system (CIPP) was being adopted by the schools as a methodology for group and individual problem solving at the school, classroom and individual student levels.



With the CIPP methodology, however, the model seems to demand an institutional change-goal that is pervasive, basic, philosophical. The long range objective of the change model in the above study was to effect change in the training of teacher trainers through a system of diagnostic teaching that would enable schools, especially those serving the culturally deprived, to provide individual students instruction suited to their particular learning styles, needs, interests and abilities. This macro-goal, the reformation of teacher training so as to personalize instruction in the schools, was basic enough to pervade three institutional levels within the field of education, and thus was a sufficient goal for the institutional change model. It is important to note, though, that the macro-goal is always presented and understood (as are the micro-goals) as a solution to real institutional problems, not as pie-in-the-sky.

Equally important is the notion of the systematic evaluation strategy of intervention used in this model. The principals of project schools praised this strategy. They found it much less threatening and therefore more readily adopted by their schools. The strategy afforded a forum in which teachers had equal say with principal and consulting team concerning the solution of school problems. If the group reached an impasse or required more information or training, consultants were identified and brought in. This process is critical to the successful implementation of the model.

These findings suggest that educational administrators might want to test this model in promoting institutional changes in their own settings.



-14-

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Appendix A Instrumentation



QUESTIONNAIRE

In conjunction with the Institute for Child Study, of the School of Education at Indiana University, I am conducting a survey of certain changes that may have occurred in southern Indiana elementary schools during the past year. Your school has been selected at random from the elementary schools in your area. Participation requires the completion of the attached questionnaire, and a short follow-up interview. We have designed our procedures so that a minimum of your time will be required.

The purpose of the survey is to identify the changes (innovations) that have occurred at your school since February of 1970. The survey places neither positive nor negative value on changes that may have occurred. It seeks only an identification by you of these changes, and your judgment of their relative merits.

You can be confident of absolute anonymity in the reporting of this study. Your responses will be coded and combined with other data, and their identity lost. The results will be used only to help prepare and train prospective teachers to work in schools like your own. Because of your position and experience, I am sure your help will make an important contribution to this objective. A report of the study will be made available to you upon completion.

School	Enrollment
Principal	Number of elementary teachers



PART I

INSTRUCTIONS: PLEASE ANSWER THE FOLLOWING QUESTIONS AS COMPLETELY AS POSSIBLE. IF I HAVE NOT ALLOWED ENOUGH SPACE FOR YOU TO WRITE OR TYPE YOUR ANSWER, PLEASE CONTINUE ON THE BACK OF THE PAGE.

- 1. One kind of change I am interested in has to do with modifications in curriculum (learning) materials. Of particular interest to me are personalized learning materials, that is, learning materials which encourage students within the same class to use different materials, depending on the individual student's level of mastery and his teacher-diagnosed learning needs. These materials could include everything from programmed reading materials to clay, which teachers use to deal with the diagnosed learning needs of their individual students.
- TO THE BEST OF YOUR KNOWLEDGE, IN THE PAST YEAR HAS YOUR FACULTY USED ANY PERSONALIZED LEARNING MATERIALS? YES_____ (If YES, answer the remaining questions on this page) (If NO, skip to the next page--Question 2) 16. TO WHAT EXTENT IS YOUR SCHOOL USING PERSONALIZED LEARNING MATERIALS, THAT IS, HOW MANY TEACHERS USE THEM? (Please check one) used by MOST of the teachers _used by ABOUT HALF of the teachers used by A FEW of the teachers There are any number of reasons that may have influenced your school to adopt personalized learning materials. Some of these may have been a special education program that included an introduction to personalized learning, a workshop on the subject attended by you and some of your faculty, for example. WHAT WERE THE REASONS, AS YOU UNDERSTAND THEM, THAT TEACHERS IN YOUR SCHOOL USED PERSONALIZED LEARNING MATERIALS? WHAT IS YOUR PERSONAL FEELING CONCERNING THE VALUE OF THE PERSONALIZED LEARNING MATERIALS WHICH YOUR SCHOOL HAS USED?



le.	I would very much like to see the personalized learning materials in use. Assuming that you and the teachers who are using the materials would not object to my visiting their classes, PLEASE INDICATE THE TIME WHEN, AND ROOMS WHERE, I COULD OBSERVE PERSON-ALIZED LEARNING MATERIALS IN USE.
2.	Other changes that I am interested in are those which had an effect on the instruction of exceptional children. For example, changes may have occurred in the availability of physical resources, teacher-expertise, or outside-expertise, or in the method of identifying exceptional children. By "exceptional children" I mean the physically handicapped, the mentally retarded, the gifted, the drop-out, and the culturally deprived.
2a.	HAVE ANY CHANGES OCCURRED IN YOUR SCHOOL OVER THE PAST YEAR WHICH HAD AN EFFECT ON THE INSTRUCTION OF EXCEPTIONAL CHILDREN? YES (If YES, answer the remaining questions on this page) NO (If NO, skip to next pageQuestion 3)
2b.	PLEASE DESCRIBE THE CHANGES WHICH HAVE AFFECTED THE INSTRUCTION OF THE EXCEPTIONAL CHILDREN IN YOUR SCHOOL.
2c.	Again, presuming you and your teacher approve, WHEN AND WHERE DURING THE SCHOOL DAY COULD I OBSERVE THE RESULTS OF THESE CHANGES?
3.	I am also interested in any other curricular or non-curricular innovations (ideas, practices, or things you consider to be new to your school) that may have been introduced in the past year, aside from those that you may have mentioned in the previous pages of this questionnaire.
3a.	HAVE ANY OTHER INNOVATIONS OCCURRED IN YOUR SCHOOL DURING THE PAST YEAR? YES (If YES, continue with the questions on this page) NO (If NO, skip to question 4below the dotted line)



3b.	DURING THE PAST YEAR. WHEN POSSIBLE, PLEASE INCLUDE OBSERVABLE EVIDENCE OF THE INNOVATIONS YOU CITE.
4.	Now, <u>aside from</u> the innovations and changes that you have already mentioned.
4a.	WHAT, IN YOUR OPINION, ARE THE MOST NEEDED INNOVATIONS OR CHANGES IN YOUR SCHOOL? (Money considerations aside).
	·
5.	There are any number of events that could have influenced the changes that have occurred in your school over the past year. Below I have listed some of the more frequently cited causes of change.
5a.	PLEASE CHECK THOSE EVENTS WHICH MAY HAVE CONTRIBUTED TO CHANGES IN YOUR SCHOOL OVER THE PAST YEAR. (Check as many as apply)
5b.	FOR EACH CHECKED CATEGORY, PLEASE EXPLAIN BRIEFLY THE EVENT AND THE CHANGE IT CAUSED. (Use the COMMENT space beneath each item) a money grant COMMENT
	success or failure of an innovation
	public opinion (desires of the local taxpayers)
	a crisis within the school
	a particular speaker at a faculty meeting
	an in-service training program
	COMMENTa personnel change
	COMMENTofficially imposed change (local school board or trustees; local, state, or federal government)
	COMMENTthe use of consultant services COMMENT
	other COMMENT

NOW, PLEASE PROCEED WITH PART 2



PART II

INSTRUCTIONS: BEFORE YOU ANSWER, PLEASE READ ALL 25 ITEMS IN THIS SECTION. THIS FIRST READING SHOULD ACQUAINT YOU WITH THE VOCABULARY USED HERE AS WELL AS PROVIDE YOU WITH AN OVERVIEW OF THE TOPICS TO WHICH YOU WILL RESPOND. AFTER READING ALL THE ITEMS, CONSIDER EACH ITEM INDIVIDUALLY. THEN CIRCLE THE ONE RESPONSE-CATEGORY THAT BEST DESCRIBES YOUR PERSONAL REACTION TO THE ITEM:

SA - Strongly Agree

A - Agree

? - Undecided

D - Disagree

SD - Strongly Disagree

PLEASE RESPOND TO EVERY ITEM. If you wish to comment on responses that seem to require elaboration or qualification, use the back of these pages to do so.

- SA A ? D SD l. Compulsory education denies the learner a free choice.
- SA A ? D SD 2. Norm-referenced grading (the practice of comparing a student's progress with national averages) should be abolished.
- SA A ? D SD

 3. The personalized model of instruction (defined as planned educational experiences based on a diagnosis of the child's current level of accomplishment and learning needs) is very necessary to the accomplishment of the elementary school's instructional objectives (pre-specified learning outcomes).
- SA A ? D SD 4. All other things being equal, I would hire a teacher who believes in centralized classroom authority rather than hire a teacher who believes in decentralized classroom authority.
- SA A ? D SD 5. The minimum standard of schooling necessary for the maintenance of a democratic industrialized society could not be achieved without compulsory education.
- SA A ? D SD 6. Norm-referenced grading provides an objective standard against which teachers can measure their teaching-effectiveness.
- SA A ? D SD 7. A model of personalized learning is so central to a school's philosophy that the teachers implementing that model should be paid according to their ability to assist their students in accomplishing the students instructional objectives.



- SA A ? D SD 8. All other things being equal, a school with a centralized authority structure provides clearer instructional goals for teachers and students than does a school with a decentralized authority structure.
- SA A ? D SD 9. Norm-referenced grading provides teachers a meaningful standard against which to measure the learning progress of their students.
- SA A? D SD 10. There is good reason to believe that without compulsory education, the transmission of the culture and heritage of our society would be jeopardized.
- SA A ? D SD 11. A personalized learning model would require such an increase in the workload of teachers that, as principal, I don't believe the model is feasible.
- SA A ? D SD 12. A school with a centralized authority structure is better capable of promoting the heritage and values of our society than is a school with a decentralized authority structure.
- SA A? D SD 13. Most students learn more when placed in competition with other students for grades, than when graded individually on their ability to meet individually prescribed learning objectives.
- SA A ? D SD 14. Compulsory education forces schools to overlook the individual differences of their students.
- SAA? D SD 15. A personalized learning model would require of teachers such sophisticated diagnosis of individual student's learning needs that, as principal, I would oppose using the model.
- SAA? D SD 16. Since teachers and students are less sure where authority and power are located, they are less likely to participate in decision-making in a school with a decentralized authority structure than they are in a school with a centralized authority structure.
- SA A? D SD 17. Criteria-referenced grading (the practice of comparing a student's progress with specific learning objectives) is better than norm-referenced grading because the former takes into account the unique environment in which each school functions, while the latter does not.
- SA A ? D SD 18. The public school system would collapse if compulsory education were abolished.



- SA A ? D SD 19. If the personalized learning model were used, schools would be hampered in their attempts to provide all students with the common understandings and skills they will need to live in a democratic society.
- SA A? D SD 20. Norm-referenced grading provides a better standard for judging the effectiveness of a particular school than does criteria-referenced grading.
- SAA? D SD 21. The use of a personalized learning model seems especially appropriate in the public schools of a society which is pluralistic and democratic.
- SA A ? D SD 22. A school with a decentralized authority structure is more apt to use a personalized learning model than is a school with a centralized authority structure.
- SA A ? D SD 23. Compulsory education destroys individuality by assuming that all students need a specific amount of instruction.
- SA A ? D SD 24. All other things being equal, teacher morale is better served in a school with a decentralized authority structure than in a school with a centralized authority structure.